

**REMARKS**

Claims 1-11 and 16-29 are the pending claims of which claim 1 is the only independent claim. By this amendment, claim 1 has been amended. New independent claim 40 is hereby added.

**Remarks Directed to Provisional Rejection of Claims 1-11 and 16-27  
under 35 U.S.C. §101 – Statutory-Type Double Patenting**

Claims 1-11 and 16-27 stand provisionally rejected under 35 U.S.C. §101 over claims 1-28, 45-47 and 54-57 of co-pending application 10/539,273. Applicant acknowledges the provisional rejection and will determine appropriate action in the case that the conflicting claims are patented.

**Remarks Directed to Provisional Rejection of Claims 1-8, 10, 19-21, 23-24 and 27  
– Non-Statutory Obviousness-Type Double Patenting**

Claims 1-8, 10, 19-21, 23-24 and 27 stand provisionally rejected over claims 1-5, 7, 12, 14-18 and 20-26 of co-pending application 10/652,732. Applicant acknowledges the provisional rejection and is willing to file a terminal disclaimer in the case that the conflicting claims are patented.

**Rejection of Claims 1-11 and 16-29 under 35 U.S.C. §112, First Paragraph**

The Examiner describes the specification as “enabling for the detection of the metabolic disorder biotinidase deficiency” but not “for the detection of any metabolic disorder...”

Applicant notes that methods of the presently claimed invention are specifically described in the specification as applicable to detect any metabolic disorder which “is a condition that interferes with normal creation or destruction of biological molecules that regulate health” and submits that the present specification is believed to be enabling for detection of such conditions.

With respect to independent claim 1, in order to advance prosecution in this case, Applicant has amended the claim to describe a method for detecting a biotinidase deficiency, an aminoacidopathy, a fatty acid oxidation disorder or an organic acidemia in an individual.

Claim 1 is further amended to indicate that a method of claim 1 includes determining the amount of one or more amino acids or carnitines as well as determining the amount of a product of biotinidase action on biocytin, the product selected from biotin and lysine, using mass spectrometry.

It is submitted that claim 1 is fully enabled. Applicant notes that the specification includes the information that “[m]etabolic analytes associated with particular metabolic disorders are well known to those skilled in the art.” In addition, Table 2-5 list exemplary aminoacidopathies, fatty acid oxidation disorders and organic acidemias as well as associated metabolic analytes.

Applicant therefore respectfully requests withdrawal of this rejection of claims 1-11 and 16-29.

**Rejection of Claims 1-11 and 16-29 under 35 U.S.C. §112, Second Paragraph**

Claims 1-11 and 16-29 stand rejected under 35 U.S.C. §112, second paragraph.

In particular, the Examiner states that “there is insufficient antecedent basis” for the phrase “wherein one or more protease inhibitors are present” in lines 8 and 9 of claim 1. Claims 2-11 and 16-29 are rejected only as being dependent from rejected claim 1.

Claim 1 is hereby amended to provide antecedent basis for this phrase. The claims are thus submitted to be definite and Applicant therefore respectfully requests withdrawal of this rejection of claims 1-11 and 16-29.

Claims 1-11 and 16-29 are further rejected under 35 U.S.C. §112, second paragraph because claim 1 describes “contacting a sample comprising biotinidase and one or more metabolic analytes with the biotinidase substrate biocytin to generate a product” and “then...contacting the reaction admixture with a reagent that inhibits biotinidase to act on biocytin...” The Examiner finds the claim unclear because “biotinidase in the sample of step (a) has already contacted and reacted with the biocytin substrate and it is unclear how “any inhibitor will prevent this reaction after the fact.”

Applicant submits that the Examiner has added the interpretation that the inhibitor should “prevent this reaction after the fact.” Applicant believes the claim to clearly describe producing a reaction admixture under conditions wherein said biotinidase is capable of acting on said biocytin, to generate at least one product and contacting said reaction admixture with a reagent that inhibits the ability of said biotinidase to act on biocytin. Preventing a reaction after the fact is neither

described nor implied by independent claim 1 or any of the dependent claims 2-11 and 16-29. Applicant believes there is no basis for the rejection and therefore respectfully requests withdrawal of this rejection of claims 1-11 and 16-29.

Claims 1-11 and 16-29 are further rejected under 35 U.S.C. §112, second paragraph because the Examiner believes that "every test sample every time will contain one or more metabolic analytes and at least one product and therefore it is unclear how any correlation will take place."

Applicant hereby amends claim 1 to clarify the claim. As described, a determined amount of one or more amino acids or carnitines correlates with presence or absence of an aminoacidopathy, fatty acid oxidation disorder or organic acidemia and a determined amount of biotin and/or lysine correlates with presence or absence of said biotinidase deficiency.

The claims are thus submitted to be definite and Applicant therefore respectfully requests withdrawal of this rejection of claims 1-11 and 16-29.

### Summary

By this amendment, claim 1 has been amended and new independent claim 40 is added. It is believed that no new matter has been introduced by way of these amendments. The claims are believed to be in proper form for allowance. Therefore, reconsideration and allowance is respectfully requested. The Examiner is invited to call the undersigned attorney with any questions or concerned.

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Respectfully submitted,

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